

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) An apparatus for sealing a perimeter of an individual cell of a fuel cell assembly comprising:

a gasket including opposed sides defining a perimeter seal for a reactant flow field of the individual cell defined by a separator plate of the fuel cell assembly and configured to be located between the reactant flow field and a corresponding catalyst membrane; and

at least one generally rigid bridge extending between and fixed to the opposed sides and extending across flow channels in the separator plate defining the reactant flow field.

2. (Original) The apparatus of claim 1 further including a gas diffusion layer having a perimeter, and with the gasket shaped to surround and mate with the perimeter of the gas diffusion layer.

3. (Original) The apparatus of claim 1 wherein the gasket includes a carrier layer and an elastomeric seal layer mounted thereto.

4. (Original) The apparatus of claim 1 wherein the bridge is integral with the gasket.

5. (Original) The apparatus of claim 1 wherein the at least one bridge is two bridges.

6. (Currently Amended) An individual cell adapted for use in a fuel cell assembly comprising:

a membrane electrode assembly including a first gasket mounted about and defining a perimeter seal for a first gas diffusion layer and a second gasket mounted about and defining a perimeter seal for a second gas diffusion layer;

a catalyst membrane having first and second sides opposite one another;

a first separator plate located on the first side of the catalyst membrane and including a first set of reactant flow channels facing the first side;

a second separator plate located on the second side of the catalyst membrane and including a second set of reactant flow channels facing the second side;
and

wherein the first gasket is located between the first side of the catalyst membrane and the first set of reactant flow channels and includes at least one first generally rigid bridge fixed to opposite sides of the first gasket and extending across the first set of flow channels, and the second gasket is located between the second side of the catalyst membrane and the second set of reactant flow channels and includes at

least one second generally rigid bridge fixed to opposite sides of the second gasket and extending across the second set of flow channels.

7. (Original) The individual cell of claim 6 wherein the first generally rigid bridge is integral with the first gasket.

8. (Original) The individual cell of claim 7 wherein the second generally rigid bridge is integral with the second gasket.

9. (Original) The individual cell of claim 6 wherein the first gasket includes a carrier layer and an elastomeric seal layer mounted thereto.

10. (Original) The individual cell of claim 9 wherein the second gasket includes a carrier layer and an elastomeric seal layer mounted thereto.

11. (Currently Amended) A method of assembling a gasket to a separator plate that has reactant fluid flow channels, the method comprising the steps of:

forming a generally rigid bridge on the gasket;

locating the gasket adjacent the reactant fluid flow channels between the separator plate and a corresponding catalyst membrane, wherein the bridge extends across the channels; and

compressing the gasket against the separator plate with a sealing load.

12. (Previously Presented) The method of claim 11 wherein the bridge is located outside of the channels after the compressing.

13. (Previously Presented) The method of claim 11 further comprising securing a gas diffusion layer to the gasket.

14. (Withdrawn) The method of claim 13 wherein the securing includes molding the gasket to the gas diffusion layer.

15. (Previously Presented) The method of claim 11 wherein the bridge extends transversely across the channels.

16. (Previously Presented) The method of claim 11 wherein the forming includes integrally molding the bridge with the gasket.

17. (Previously Presented) The apparatus of claim 1 wherein the bridge extends transversely across the channels.

18. (Previously Presented) The individual cell of claim 6 wherein the bridge extends transversely across the channels.

19. (New) The apparatus of claim 2 wherein the bridge is configured to be located directly adjacent to the diffusion media and the flow channels.

20. (New) The individual cell of claim 6 wherein the first bridge is located directly between the first gas diffusion layer and the first set of reactant flow channels and the second bridge is located directly between the second gas diffusion layer and the second set of reactant flow channels.